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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,647	11/18/2005	Torsten Balduf	5003073.066US1	3421
29737	7590	12/17/2007		
SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420			EXAMINER PUTTLITZ, KARL J	
			ART UNIT	PAPER NUMBER
			1621	
			NOTIFICATION DATE	DELIVERY MODE
			12/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/541,647

Applicant(s)

BALDUF ET AL.

Examiner

Karl J. Puttlitz

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 12-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/8/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I claim(s) 1-11 drawn to a process for the purification of an acidic monomer

Group II claim(s) 12-21 drawn to a device

Group III claim(s) 22-25 drawn to a a process for the purification of an acidic monomer

Group IV claim(s) 26 and 27 drawn to a fibers and the use of an acidic monomer to produce fibers.

Unity exists when there is a technical relationship among the claimed inventions involving one or more corresponding special technical features. A special technical feature is a contribution which each of the inventions, considered as a whole, makes over the prior art. See M.P.E.P Appendix AI, § 206 and Annex B.

Here, the foregoing groups lack unity since the special technical features of the Groups do not correspond.

During a telephone conversation with Philip McCann on 11/27/2007 a provisional election was made without traverse to prosecute the invention of Group I claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 allows 0.01 wt. % of at least one starting mixture component. It is unclear as to the identity of the starting mixture components.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,663,375 to Witheford (Witheford) in view of U.S. Patent No. 5,831,124 to Machhammer et al. (Machhammer).

The rejected claims cover, inter alia, A process for purification of an acidic monomer having a double bond, comprising the steps of: (a) providing a starting mixture, containing as starting mixture components, respectively based on the starting mixture,

(a1) at least about 5 wt. % of the acidic monomer and either

(a2) at least about 0.01 wt. % water, or

(a3) at least about 0.01 wt. % of at least one starting mixture component, or

(a2) and (a3)

wherein the sum of the wt. % proportions of the starting mixture components gives respectively 100 wt. %;

(b) adding a phase former or a salt of this phase former or a mixture of both to obtain a purification mixture, from which

(c) at least one first phase and an at least one further phase distinguished from the first phase by means of a phase boundary form a phase system;

(d) lowering of the temperature of the phase system; wherein

(e) in one of the phases of the phase system a product crystal containing at least about 50 wt. % of one of the starting mixture components is formed in addition to

another starting mixture component as a crystal system; (f) isolating the product crystals.

With regard to the above embodiments, Witheford teaches that an electrolyte such as sodium sulfate or sulfuric acid is added to an aqueous solution of isobutyric acid and methacrylic acid in amount sufficient to cause salting-out, which is separation of the mixture into two immiscible phases; one phase is an aqueous sodium sulfate solution and other phase is an organic solution of the two acids. These two immiscible phases of the mixture are physically separated as by gravity in a decanter to obtain a principally aqueous solution of electrolyte with only very minor proportions of the organic components and a principally organic solution with only a very minor proportion of water. See column 1, lines 35+.

Witheford fails to explicitly teach lowering of the temperature of the phase system; wherein one of the phases of the phase system a product crystal containing one of the starting mixture components is formed. However, it is for this proposition that the examiner joins Machhammer. Specifically, Machhammer teaches that crystallization is used as a phase separation technique to separate out methacrylic acid from its product mixture, see column 3 lines 3+ and 29+. In this regard, the use of crystallization to separate (meth)acrylic acid from product mixtures, including phase systems is known in the art. Therefore it would have prima facie obvious to use crystallization since Machhammer teaches that this technique is common, and thus predictable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached at telephone number (571) 272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karl Puttlitz/
Karl Puttlitz
Primary Examiner
Art Unit 1621